

**REMARKS**

The Examiner is thanked for the indication of allowability for claims 1 through 31 presented in the original filing of the application, and consideration of added claims 39 through 43 is respectfully requested.

**VERSION WITH MARKINGS TO SHOW CHANGES MADE:**

**In the Claims** (bracketed parts deleted and underline parts added):

1. (Pending) A method of applying polyacrylamide (PAM) for stabilizing soil particles of a land area from erosive movement about the land area, the method comprising;  
establishing a uniform mixture ratio for a mixture of PAM and water to be applied to a land area;  
calculating a total application rate for applying the mixture to the land area;  
mixing PAM with water according to the uniform mixture ratio to form a mixture for application to the land area;  
applying the mixture to a top surface of soil of the land area; and  
terminating the application of the mixture when PAM reaches sufficient depth penetration below a top surface of the soil.

2. (Pending) The method of claim 1 wherein the establishing step includes mixing PAM and water in a ratio of about 1 part PAM to between about 500 and about 5000 parts water by volume.

3. (Pending) The method of claim 1 wherein the establishing step includes mixing PAM and water in a ratio of 1 part PAM to about 1000 parts water by volume.

4. (Pending) The method of claim 1 additionally comprising the step of determining a number of times that the mixture of the uniform mixture ratio needs to be applied to the land area to achieve the calculated total application rate of the PAM.

5. (Pending) The method of claim 1 wherein the applying step comprises making a series of applications of the mixture to the surface for a number of times until the application rate for the soil

of the land area is achieved.

6. (Pending) The method of claim 1 wherein the applying step includes misting a portion of the total application rate of the mixture onto the surface of the land area to produce a tack coat for initially stabilizing topmost soil particles on the top surface of the land area against soil particle movement caused by subsequent mixture applications.

7. (Pending) The method of claim 1 wherein the applying step includes continuing to apply the mixture to the surface of the soil until the soil of the land area becomes saturated and stopping the application of the mixture top surface becomes saturated.

8. (Pending) The method of claim 7 additionally comprising detecting saturation of the soil when the mixture appears to be accumulating on the surface rather than being relatively quickly absorbed into the ground and the mixture on the top surface appears to reflect ambient light.

9. (Pending) The method of claim 8 wherein the applying step includes waiting for a time period after detection of saturation such that the mixture is able to penetrate the ground below the surface, wherein the time period comprises the time required for any puddles of the mixture on the top surface of the soil to be absorbed into the soil below the top surface.

10. (Pending) The method of claim 9 wherein the waiting step is conducted for a time period that is less than the time required for the top surface of the soil to dry.

11. (Pending) The method of claim 1 wherein the applying step includes the step of directing a spray of the mixture onto the

top surface of the soil of the land area from at least four directions, each of the directions being oriented at about 90 degrees to at least two of the other directions.

12. (Pending) The method of claim 11 wherein the applying step includes the step of directing a spray of the mixture at a substantially perpendicular angle downward onto the top surface of the soil of the land area, wherein the direction of the substantially perpendicular spray varies less than about 15 degrees measured from an axis perpendicular to the surface of the soil.

13. (Pending) The method of claim 1 additionally comprising testing the extent of penetration of the PAM below the top surface of the soil of the land area.

14. (Pending) The method of claim 1 wherein the testing step includes removing a core sample of the soil from the land area.

15. (Pending) The method of claim 1 additionally comprising the step of comparing the depth penetration of the PAM below the top surface of the soil of the land area to a set of minimum depth penetration values based upon the general slope of the land area to determine the minimum depth penetration needed for the land area being treated before terminating application of the mixture to the land area;

wherein if the general slope of the land area is between substantially level and a general slope of 4 to 1, inclusive, the sufficient depth penetration is a minimum of about 1.3 inches;

wherein if the general slope of the land area is about 3 to 1, the sufficient depth penetration is a minimum of about 1.5 inches;

wherein if the general slope of the land area is about 2 to 1, the sufficient depth penetration is a minimum of about 2 inches;

wherein if the general slope of the land area is about 1.5 to 1, the sufficient depth penetration is a minimum of about 2.5 inches; and

wherein if the general slope of the land area is about 1 to 1 or steeper, the sufficient depth penetration is a minimum of about 3 inches.

16. (Pending) The method of claim 15 additionally comprising exceeding the total application rate calculated if the sufficient minimum depth penetration is not achieved through application of mixture to the soil at the total application rate.

17. (Pending) A method of applying polyacrylamide (PAM) for stabilizing soil particles of a land area from erosive movement about the land area, the method comprising; establishing a uniform mixture ratio for a mixture of PAM and water to be applied to a land area; calculating a total application rate for applying the mixture to the land area; mixing PAM with water according to the uniform mixture ratio to form a mixture for application to the land area; and applying the mixture to a top surface of soil of the land area by misting a top surface of the land area with the mixture for producing a tack coat of the PAM for initially stabilizing topmost soil particles on the top surface of the land area against soil particle movement caused by any subsequent mixture applications.

18. (Pending) The method of claim 17 additionally comprising the step of determining a number of times that the mixture of the uniform mixture ratio needs to be applied to the land area to achieve the calculated total application rate of the PAM.

19. (Pending) The method of claim 18 wherein the applying step comprises making a series of applications of the mixture to the soil according to the number of times determined to achieving the total application rate for the soil of the land area using the is achieved.

20. (Pending) The method of claim 17 wherein the applying step includes continuing to apply the mixture to the surface of the soil until the soil of the land area becomes saturated and stopping the application of the mixture top surface becomes saturated.

21. (Pending) The method of claim 20 additionally comprising detecting saturation of the soil when the mixture appears to be accumulating on the surface rather than being relatively quickly absorbed into the ground and the mixture on the top surface appears to reflect ambient light.

22. (Pending) The method of claim 21 wherein the applying step includes waiting for a time period after detection of saturation such that the mixture is able to penetrate the ground below the surface, wherein the time period comprises the time required for any puddles of the mixture on the top surface of the soil to be absorbed into the soil below the top surface.

23. (Pending) The method of claim 22 wherein the waiting step is conducted for a time period that is less than the time required for the top surface of the soil to dry.

24. (Pending) The method of claim 17 wherein the applying step includes the step of directing a spray of the mixture onto the top surface of the soil of the land area from at least four directions, each of the directions being oriented at about 90 degrees to at least

two of the other directions.

25. (Pending) The method of claim 17 wherein the applying step includes the step of directing a spray of the mixture at a substantially perpendicular angle downward onto the top surface of the soil of the land area, wherein the direction of the substantially perpendicular spray varies less than about 15 degrees measured from an axis perpendicular to the surface of the soil.

26. (Pending) The method of claim 17 additionally comprising testing the extent of penetration of the PAM below the top surface of the soil of the land area.

27. (Pending) The method of claim 17 wherein the testing step includes removing a core sample of the soil from the land area.

28. (Pending) The method of claim 17 additionally comprising the step of terminating the application of the mixture when PAM reaches sufficient depth penetration below a top surface of the soil.

29. (Pending) The method of claim 28 additionally comprising comparing the depth penetration of the PAM below the top surface of the soil of the land area to a set of minimum depth penetration values based upon the general slope of the land area to determine the minimum depth penetration needed for the land area being treated before terminating application of the mixture to the land area;

wherein if the general slope of the land area is between substantially level and a general slope of 4 to 1, inclusive, the sufficient depth penetration is a minimum of about 1.3 inches;

wherein if the general slope of the land area is about 3 to 1, the sufficient depth penetration is a minimum of about 1.5 inches;

wherein if the general slope of the land area is about 2 to 1,

the sufficient depth penetration is a minimum of about 2 inches;

wherein if the general slope of the land area is about 1.5 to 1, the sufficient depth penetration is a minimum of about 2.5 inches; and

wherein if the general slope of the land area is about 1 to 1 or steeper, the sufficient depth penetration is a minimum of about 3 inches.

30. (Pending) The method of claim 17 wherein the establishing step includes mixing PAM and water in a ratio of about 1 part PAM to between about 500 and about 5000 parts water by volume.

31. (Pending) The method of claim 17 additionally comprising the step of considering the relative compaction of the soil of the land area, and increasing a number of times of applications of the mixture if the top surface of the soil of the land area has a compacted crust for loosening the compaction of the soil to enhance the penetration of subsequent applications of the mixture into the soil.

Claims 32 through 38 of the application have been previously cancelled in the Examiner's Amendment, without prejudice.

Please add the following claims:

39. (Added) A method of applying polyacrylamide (PAM) for stabilizing soil particles of a land area from erosive movement about the land area, the method comprising;  
mixing PAM with water to form a mixture for application to the land area;  
applying the mixture to a top surface of soil of the land area; and  
terminating the application of the mixture when PAM reaches



sufficient depth penetration below a top surface of the soil.

40. (Added) The method of claim 39 additionally comprising the step of establishing a uniform mixture ratio for a mixture of PAM and water to be applied to a land area, and wherein the mixture formed by the mixing step has a ratio of PAM and water corresponding to the uniform mixture ratio.

41. (Added) The method of claim 40 additionally comprising the step of calculating a total application rate for applying the mixture to the land area, and additionally comprising the step of determining a number of times that the mixture of the uniform mixture ratio needs to be applied to the land area to achieve the calculated total application rate of the PAM.

42. (Added) The method of claim 39 additionally comprising the step of calculating a total application rate for applying the mixture to the land area, and wherein the applying step comprises making a series of applications of the mixture to the surface for a number of times until the application rate for the soil of the land area is achieved.

43. (Added) The method of claim 39 wherein the applying step includes continuing to apply the mixture to the surface of the soil until the soil of the land area becomes saturated and stopping the application of the mixture top surface becomes saturated.

### CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,



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Jeffrey A. Proehl (Reg. No. 35,987)  
KAARDAL & ASSOCIATES, P.C.  
3500 South First Avenue Circle, Suite 250  
Sioux Falls, SD 57105-5802  
(605)336-9446 FAX (605)336-1931  
e-mail patent@kaardal.com